



How We Use Safran Project in the Construction of the New Rikshospitalet and New Hospital at Aker

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Agenda

- Introduction to Sykehusbygg HF and Project Facts
- Plan Levels and Their Integration
- Administrative Deliverables and Quality Control
- SRA and Risk Module Utilization

Sykehusbygg HF

Sykehusbygg HF was established on October 23, 2014, with all four health regions as owners. We ensure a national center of excellence for hospital planning and construction at a high international level. Sykehusbygg HF shall be used in all construction projects with a value of over 500 million NOK. We are celebrating our 10th anniversary this year.

Sykehusbygg shall provide services related to the development, planning, and execution of construction projects, as well as property services that offer common benefits for the healthcare sector. This includes:

- Development and management of knowledge, methods, and tools for building and property-related hospital planning
- Access to personnel with specialized expertise in all phases of the lifecycle of a hospital property
- Project management and advisory services for construction projects
- Other services that naturally fall within the purpose of Sykehusbygg HF

Sykehusbygg HF shall serve as a resource provider for hospital owners and the healthcare sector at large.

We have 187 full-time employees, 17 employees on temporary contracts, and 206 hired consultants.

Nye Aker:

Will become one of Norway's largest local hospitals



171 000 square meters of new construction
21 700 square meters of renovation



459 beds for somatic treatment
303 beds for mental health care and addiction



Workplace for more than **6 000** employees

Nye Aker

Somatikkbygget

Sinsenaksen

Akerløperen

Psykisk helsevern
og avhengighet
- sør

Psykisk helsevern
og avhengighet
- nord

Psykisk helsevern
og avhengighet
- midt

Vare- og
distribusjonssentral og
teknisk sentral



Nye Rikshospitalet: Will become a comprehensive regional hospital



150 769 square meters of new construction
close up to a fully operational hospital



562 new beds for somatic treatment



Workplace and study site for approximately
9 700 people

Nye Rikshospitalet

An aerial architectural rendering of the new Rikshospitalet complex. The image shows a large, interconnected group of modern brick buildings with flat roofs, some featuring green roofs. The complex is surrounded by lush green trees and landscaped areas. A multi-lane highway is visible on the left side of the image. Several blue callout boxes with white text and white curved arrows point to specific areas of the complex, highlighting planned developments and infrastructure changes.

Utvidelse av
teknisk sentral

Nytt
behandlingsbygg

Nytt barne- og
ungdomssykehu
s

Utvidelse
varemottak

Ny trase for
Sognsvannsveie
n

In summery:



321 769 square meters of new construction
21 700 square meters of renovation



1 324 new beds for healthcare treatment



Workplace and study site for approximately
15 700 people

The budget at baseline 04 shows that each of these hospitals will cost approximately **22 billion** NOK each, totaling **44 billion** NOK



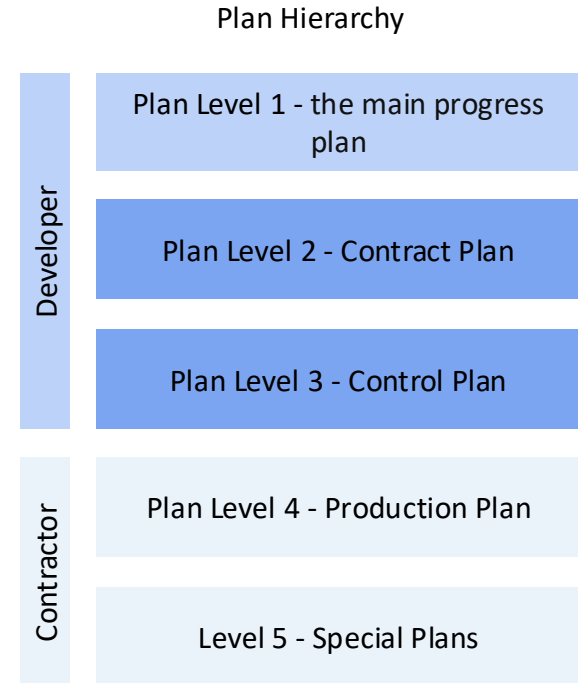
Our main goals are:
the handover and
commissioning of both
hospitals simultaneously
should occur by the end of
Q3 2031.

*...so today we have **1 560** working days
to complete this mission*



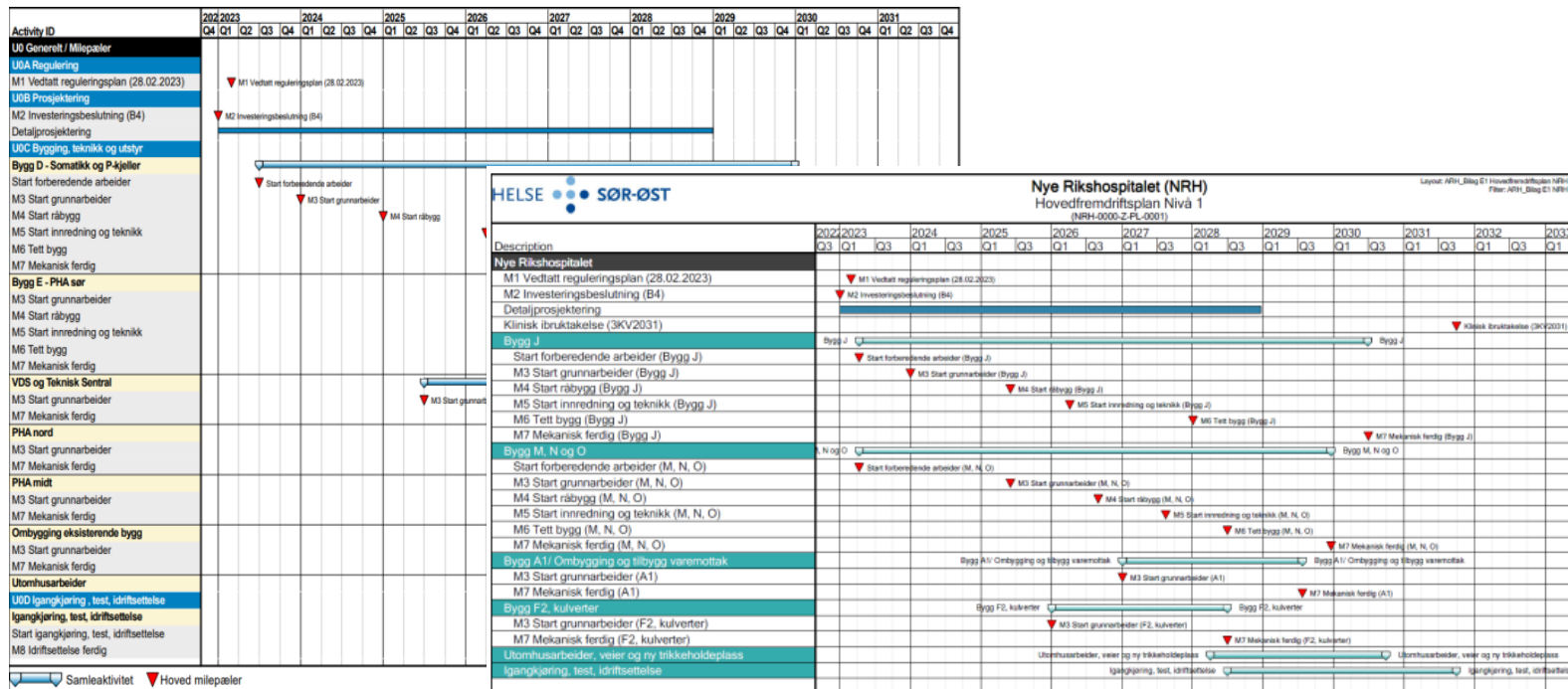
Plan Levels and Their Integration

- We use Safran Project, both projects are in the same database
- All levels are linked together so that we can quickly track changes that will impact key milestones in the main progress plan
- Level 2 is the contract plan, and here we see the processes from design through contracting and finally to production.
- It is the control plan that creates the basis for the deadlines in the contracting plan
- The production plan is the contractors' plans, and follows the sub-milestones provided by us as the client to assist the contractor in their progress

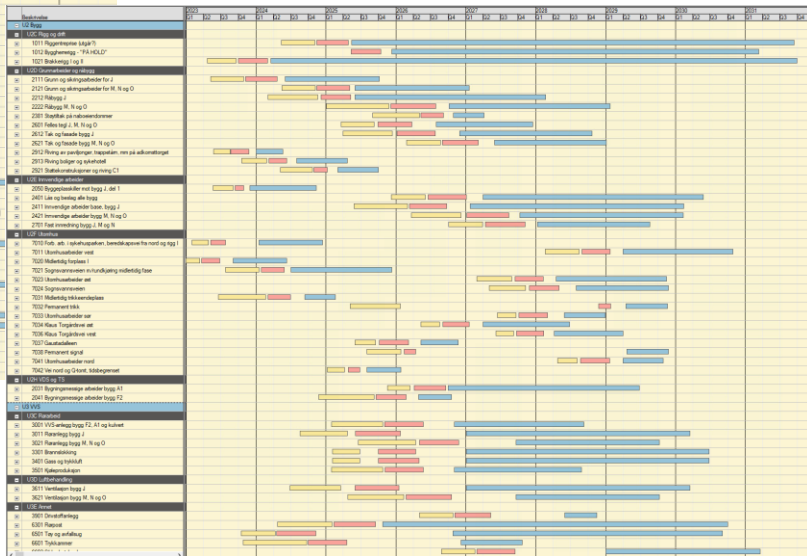


Level 1 Master Schedule

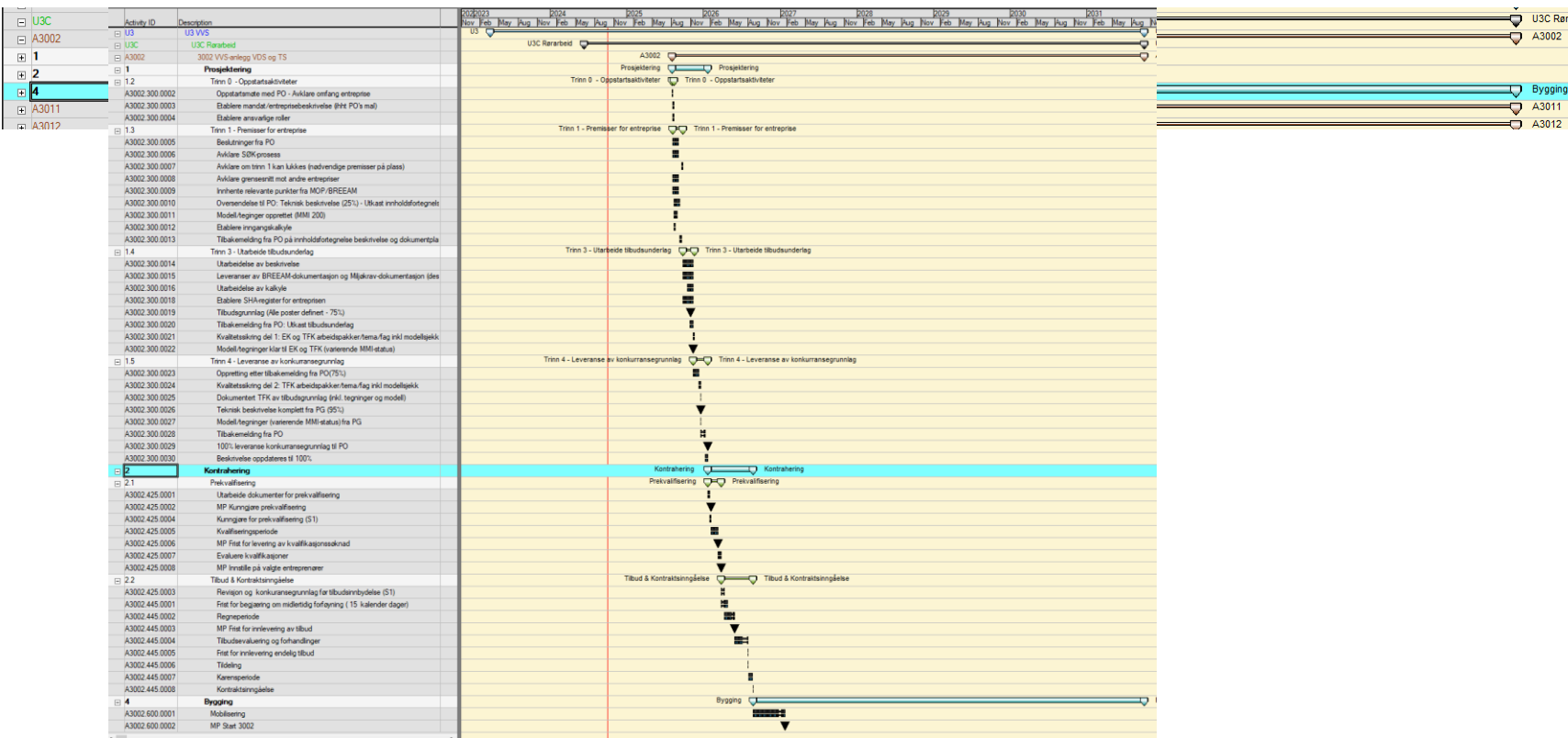
Level 1, the master schedule, has been approved by the steering committee, and it is the one we are steering towards



Level 2 – Contract Plan



Plan Level 3 - Control Plan



Administrative Deliverables and Quality Control

We are still in an early phase of the project, but in all phases, we perform verifications and quality controls such as:

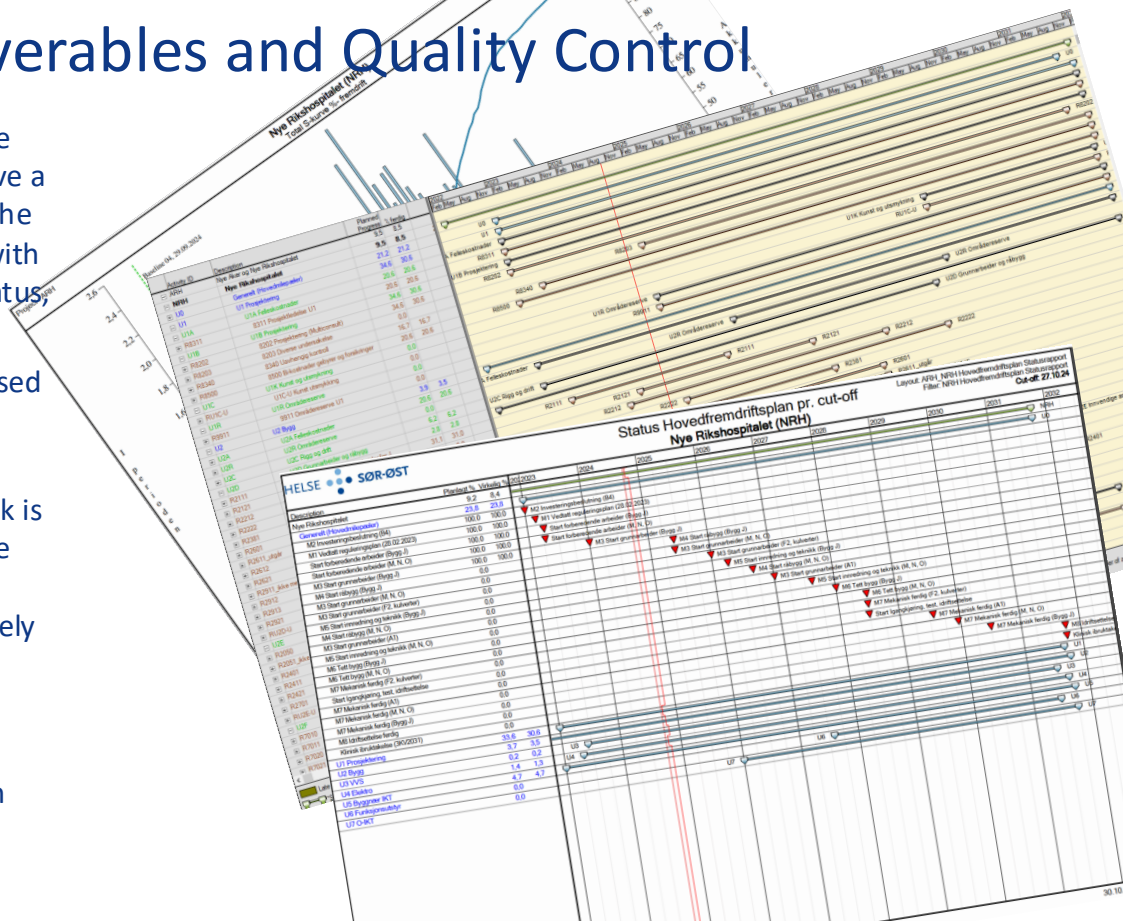
- Interface clarifications
- Technical clarifications
- Safety, health, and environmental clarifications
- Basis for dialogue with the market
- Calculation of sufficient construction time
- Quality control of everything sent out, to name a few.

All of these is included as activities in our planning documents, and the consequences of delays are quickly absorbed

1	Prosjektering
1.2	Tenn 0 - Oppstartaktiviteter
A2211.300.0001	Oppstartsmøte med PO - Avklare omfang entrepriser
A2211.300.0002	Etablere mandat/entreprisebeskrivelse (Hitt PO's mål)
A2211.300.0003	Etablere ansvarlige roller
A2211.300.0015	Avklare krav til søknader
A2211.300.0020	Beslutte prosjekteringsgrunnlag (2D/3D)
1.4	Tenn 3 - Uarbeidete tilbudunderlag
A2211.300.0022	Teknisk beskrivelse (25%) Uklust innholdsfotegnelse
A2211.300.0024	Modell.tegninger opprettet (MMI 200)
A2211.300.0025	Uklust dokumentplan inkl oversikt fagnmodell
A2211.300.0026	Avklare grensesnitt
A2211.300.0027	Beslutte dimensjoneringsgrunnlag
A2211.300.0028	Tilbakemelding PO dokumentplan og mengdebeskrivelse
A2211.300.0029	MP til nødvendig grunnlagsdata innhentet
A2211.300.0030	Fortløpende kollisjonskontroll
A2211.300.0031	SHA aktiviteter (ROS analyser / Risiko register / Restrisikoreport)
A2211.300.0032	Teknisk beskrivelse (Alle poster definert - uten mengder - Uk 75%)
A2211.300.0033	Modell.tegninger klar til EK og FK (MMI 300)
A2211.300.0034	Eventuelt underlag til markedsdialog (Etter ønske fra PO)
A2211.300.0035	Kvalitetssjekk del 1: EK og FK arbeidspakker tema/fag inkl modellgjekk
A2211.300.0036	MP Uklust tilbudunderlag sendes PO
A2211.300.0037	Tilbakemelding PO uklust tilbudunderlag
1.5	Tenn 4 - Leveranse av konkurransegrunnlag
A2211.300.0070	Opprettet etter tilbakemelding fra PO (75%)
A2211.300.0071	Kvalitetssjekk del 2: TFK arbeidspakker tema/fag inkl modellgjekk
A2211.300.0072	Dokumentert TFK av 2D/3D arbeidsgrunnlag
A2211.300.0073	Modell.tegninger (MMI 375) fra PG
A2211.300.0074	Teknisk beskrivelse komplett fra PG (95%)
A2211.300.0075	Tilbakemelding fra PO
A2211.300.0076	Beskrivelse oppdatert til 100%
A2211.300.0077	100 % leveranse konkurransegrunnlag til PO
2	Konstruksjon
2.1	Prekvalifisering
A2211.425.0001	Site KS av kontraktbilag S1 innvieses
A2211.425.0002	Kunngjøre for prekvalifisering (S1)
A2211.425.0003	MP Kunngjøre prekvalifisering (S1)
A2211.425.0005	Kvalifiseringsperiode
A2211.425.0006	MP Frist for prekvalifisering
A2211.425.0007	Evaluere kvalifikasjoner
A2211.425.0009	MP Innstille på valgte entreprenører
2.2	Tilbud & Kontraktsavgjørelse
A2211.425.0008	Revisjon og konkurransegrunnlag for tilbudsinnbydelse (S1)
A2211.445.0002	Frist for begynnelse om midlertidig forlenging (15 kalender dager)
A2211.445.0003	Regningsperiode

Administrative Deliverables and Quality Control

- We report to our management and the steering committee every month. I have a duty to attend regular meetings with the steering committee to provide them with first-hand information on progress, status, and challenges.
- The report packages are generated based on the data we receive from our organization and the contractors.
- Our reporting rate for the current week is 93.5%. The goal is a 95% reporting rate because we need the most valid information possible to report accurately and reliably
- For our interior work, we will use a module for progress reporting from Omega 365 that integrates with Safran



Schedule Risk Analysis (SRA) and Risk Module Utilization

- We use the Risk module in Safran Project
- We primarily use Distribution = Beta PERT
- We conduct quarterly SRAs (Schedule Risk Analysis) each quarter on selected enterprises that have started and those that will start in the near future. All calculations of construction time must go through an SRA before milestones are set.
- Every December, a comprehensive SRA is conducted on both projects and presented to the steering committee.
- Our scope is:
 - We must be completed at the agreed cost, at the agreed time, and to the agreed quality.
 - We must make our project managers, site managers, and contractors aware of the risk profile we see and the duration they must complete their enterprise to achieve our common goals and milestones.
 - In the phase we are in today, the most important thing is to detect and inform about the measures that must be taken to address the threats and risks we see that will affect milestone M7 (mechanical completion) and M8 (handover and commissioning).



Thank you for your attention